Copolymers comprising polyalkylene oxide groups and quaternary nitrogen atoms

Abstract

- 5 Copolymers which comprise in copolymerized form,
 - (A) 60 to 99% by weight of at least one monoethylenically unsaturated polyalkylene oxide monomer of the formula I

$$H_2C = CR^1 - X - Y - \left(-R^2 - O - \frac{1}{n}R^3\right)$$

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in which the variables have the following meanings:

X is -CH₂- or -CO-, if Y is -O-; is -CO-, if Y is -NH-;

Y is -O- or -NH-;

R¹ is hydrogen or methyl;

R² are identical or different C₂-C₆-alkylene radicals, which may be linear or branched and may be arranged blockwise or randomly;

 R^3 is hydrogen or C_1 - C_4 -alkyl;

n is an integer from 3 to 50,

(B) 1 to 40% by weight of at least one quaternized nitrogen-containing monoethylenically unsaturated monomer,

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- (C) 0 to 39% by weight of anionic monoethylenically unsaturated monomers and
- (D) 0 to 30% by weight of other nonionic monoethylenically unsaturated monomers
- and have an average molecular weight M_w of from 2000 to 100 000,

and use of these copolymers as dispersants for clay minerals.